

WHAT IS CLAIMED IS:

1. A power generation controller for controlling power generation of a power generator, comprising:

a voltage control means for controlling an output voltage of the power generator by turning on and off a first switching means connected in series to a field winding of the power generator;

a power generation detecting means for detecting start-up conditions of power generation in a case that a frequency of a phase voltage of a stator winding of the power generator exceeds a predetermined reference value;

a resistor and a second switching means connected in series between a terminal where the phase voltage is applied and a negative terminal of a battery; and

a switching control means for temporarily turning on the second switching means prior to power generation regardless of an amplitude of the voltage at the terminal.

2. A power generation controller as in claim 1, wherein the switching control means periodically turns on the second switching means when the voltage at the terminal exceeds a predetermined voltage.

3. A power generation controller as in claim 1, wherein:

the switching control means turns on the first switching means and energizes the field winding only during a period when the voltage at the terminal exceeds a predetermined voltage, which is smaller than a predetermined voltage with which the switching control means

controls the second switching means; and

the switching control means temporarily turns on the second switching means in step with a start of energizing the field winding.

5 4. A power generation controller as in claim 3, wherein the switching control means determines a second period of deenergizing the field winding after the first period of energizing the field winding.

10 5. A power generation controller as in claim 3, wherein the switching control means sets a period for turning on the second switching means longer than a delay with which it actually turns on after a command for turning on is issued.

15 6. A power generation controller as in claim 1, further comprising:

a resistor connected in parallel with a series circuit of the resistor and the second switching means, and having a resistance larger than that of the resistor of the series circuit.

20 7. A power generation controller as in claim 3, wherein the switching control means detects a peak value of the voltage, and compares the peak value with the predetermined voltage for energizing the field winding.

25 8. A power generation control method for a power generator having a stator winding and a field winding, the method comprising the

steps of:

comparing a phase voltage of the stator winding applied through a resistor with a first predetermined voltage to produce pulse signals at a frequency proportional to a rotation speed of the power generator;

5 comparing the phase voltage of the stator winding with a second predetermined voltage higher than the first predetermined voltage;

decreasing a resistance of the resistor as long as a number of the pulse signals is less than a predetermined number and the phase voltage is less than the second predetermined voltage, thereby
10 reducing the phase voltage; and

controlling a current supply to the field winding after the number of the pulse signals reaches the predetermined number.